

CLAIMS

What is claimed is:

1. An electronic camera, comprising:

a multi-mode image sensor having an array of light sensitive elements, wherein the sensor provides an output signal derived from the array, and wherein the output signal has a transfer function that includes a normal sensitivity region, a highlight sensitivity region, and a breakpoint between the regions; and

a correction circuit for correcting differences between breakpoints of the transfer function, wherein the differences are caused by different light sensitive elements of the array.

2. An electronic camera as recited in claim 1, wherein the correction circuit includes at least one lookup table, wherein the at least one lookup table has an input to identify a particular light sensitive element of the array, and wherein the at least one lookup table has an output to provide a correction value.

3. An electronic camera as recited in claim 1, wherein the correction circuit includes at least one lookup table, wherein the at least one lookup table has an input to identify a plurality of particular light sensitive elements of the array, and wherein the at least one lookup table has an output to provide a same cluster identifier for each of the plurality of particular light sensitive elements.

4. A method for improving the highlight reproduction of an imaging system, comprising:

providing a multi-channel image of a scene using a multi-mode image sensor;

identifying highlight regions in the image;

calculating flare intensity values for the image using the locations of the highlight regions; and

subtracting the flare intensity values from the image.

5. A method as recited in claim 4, wherein the flare intensity values are determined using a convolution function.

6. A method as recited in claim 4, wherein the flare intensity values are calculated using an equation that is a function of the distance from at least one highlight region.

7. A method as recited in claim 4, wherein the flare intensity values are calculated using an equation that is a sum of functions of the distances from a plurality of highlight regions.

8. A method as recited in claim 4, wherein the image is a multi-channel image.

9. A method as recited in claim 4, wherein the image is provided using a multi-mode sensor.

10. A method for improving the highlight reproduction of an imaging system, comprising:

identifying highlight regions in a multi-channel image of a scene;

identifying a first channel, wherein the first channel includes saturated signal values in a portion of the highlighted region;

identifying a second channel, wherein the second channel includes unsaturated signal values in the portion of the highlighted region; and

modifying the signal values of the first channel in the portion of the highlighted region using the signal values in the second channel.

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